

## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Reinhard E. Senz Examiner #: 59778 Date: 3/5/03  
Art Unit: 2602 Phone Number 305-4711 Serial Number: 101322589  
Mail Box and Bldg/Room Location: PL2 8A3 Results Format Preferred (circle): PAPER DISK E-MAIL

**If more than one search is submitted, please prioritize searches in order of need.**

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Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: \_\_\_\_\_

Inventors (please provide full names): \_\_\_\_\_

Earliest Priority Filing Date: \_\_\_\_\_

*\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

US 6198402

## STAFF USE ONLY

Searcher: KEJ  
Searcher Phone #: \_\_\_\_\_  
Searcher Location: \_\_\_\_\_  
Date Searcher Picked Up: 2/5/03  
Date Completed: 3/5/03  
Searcher Prep & Review Time: \_\_\_\_\_  
Clerical Prep Time: \_\_\_\_\_  
Online Time: 20

## Type of Search

NA Sequence (#) \_\_\_\_\_  
AA Sequence (#) \_\_\_\_\_  
Structure (#) \_\_\_\_\_  
Bibliographic \_\_\_\_\_  
Litigation X  
Fulltext \_\_\_\_\_  
Patent Family \_\_\_\_\_  
Other \_\_\_\_\_

## Vendors and cost where applicable

STN \_\_\_\_\_  
Dialog  
Questel/Orbit  
Dr.Link \_\_\_\_\_  
Lexis/Nexis  
Sequence Systems \_\_\_\_\_  
WWW/Internet \_\_\_\_\_  
Other (specify) \_\_\_\_\_

Query/Command : prt max legalall

/// PLUSPAT - ©QUESTEL-ORBIT

**PN** - **US6198402** B1 20010306 [**US6198402**]  
**TI** - (B1) Electric power system protection and control system  
**PA** - (B1) TOKYO SHIBAURA ELECTRIC CO (US)  
**PA0** - Kabushiki Kaisha Toshiba, Kawasaki [JP]  
**IN** - (B1) HASEGAWA OSAMU (JP); SIROTA YOSIHIRO (JP); KAINO YASUO (JP)  
**AP** - US29268399 19990416 [1999US-0292683]  
**PR** - JP10825598 19980417 [1998JP-0108255]  
**IC** - (B1) G08B-021/00  
**EC** - H02H-003/00C  
 H02H-007/26B  
**PCL** - ORIGINAL (O) : 340635000; CROSS-REFERENCE (X) : 340286010 340286020  
**DT** - Corresponding document  
**CT** - US5926089; EP0853368; EP0940901; JP10-222785; JP10-257661  
 Toshiba Fuchu Works, Project I, pp. 2-35, 1991.

Toshiba Protective Relays, Toshiba Corporation, pp. 1-13.

Bolam et al., "Experience in the Application of Substation Co-Ordinated Control and Protection with Development Trends in the Standard Control System Open Architecture," Fourth International Conference on Power System Control and Management, pp. 92-97, London, UK, Apr. 16-18, 1996.

Lu Wenzhe et al., "A Simple Data Communication Scheme of a Modular Comprehensive Automation System for Substations," Proceedings of the 4<sup>sup</sup>.th International Conference on Advances in Power System Control Operation and Management, pp. 317-320, Hong Kong, Nov. 11-14, 1997.

Ungrad et al., "The Role of SMS (Substation Monitoring Systems) in Enhancing Protection and Control Functions," 12<sup>sup</sup>.th International Conference on Electricity Distribution, pp. 4.10.1-4.10.5, London, UK, May 17-21, 1993.

**STG** - (B1) U.S. Patent (no pre-grant pub.) after jan. 2, 2001  
**AB** - A Power system protection and control system has protection and control terminals that perform protection and control of a power system by operation of a plurality of CBs in response to state variables input from power system; and a power system monitoring and control host mutually connected in a fashion to permit data exchange through a transmission system (communication network) with protection and control terminals and that performs monitoring and control of power system in accordance with data transmitted from protection and control terminals. Protection and control terminals each has a correlation circuit that performs correlation of a operated CB and the cause of its operation, using information sent from protective relay circuit, CB control circuit, re-closure circuit and CB state receiving circuit when at least one of a plurality of CBs is operated, and a correlation result transmission circuit that transmits the result obtained by the correlation processing of this correlation circuit to power system monitoring and control host through transmission system. The power system monitoring and control host includes a correlation result transmission unit that receives and displays the correlation result transmitted through transmission system from correlation result transmission circuit, associated message file storage unit and CB operation display unit.  
**UP** - 2001-14

/// LGST - ©LEGSTAT

**PN** - US 6198402 [US6198402]  
**AP** - US 292683/99 19990416 [1999US-0292683]  
**DT** - US-P  
**ACT** - 19990416 US/AE-A  
APPLICATION DATA (PATENT)  
US 292683/99 19990416 [1999US-0292683]  
  
20010306 US/BA  
PATENT (NO PREVIOUS PRE-GRANT PUBLICATION)  
**UP** - 2001-15

UNITED STATES PATENT AND TRADEMARK OFFICE GRANTED PATENT

6198402

<=1> Get Drawing Sheet 1 of 17

March 6, 2001

Electric power system protection and control system

APPL-NO: 292683 (09)

FILED-DATE: April 16, 1999

GRANTED-DATE: March 6, 2001

CORE TERMS: relay, correlation, message, processing, re-closure, transmission, monitoring, switch, terminal, transmitted ...

ENGLISH-ABST-1:

A Power system protection and control system has protection and control terminals that perform protection and control of a power system by operation of a plurality of CBs in response to state variables input from power system; and a power system monitoring and control host mutually connected in a fashion to permit data exchange through a transmission system (communication network) with protection and control terminals and that performs monitoring and control of power system in accordance with data transmitted from protection and control terminals. Protection and control terminals each has a correlation circuit that performs correlation of an operated CB and the cause of its operation, using information sent from protective relay circuit, CB control circuit, re-closure circuit and CB state receiving circuit when at least one of a plurality of CBs is operated, and a correlation result transmission circuit that transmits the result obtained by the correlation processing of this correlation circuit to power system monitoring and control host through transmission system. The power system monitoring and control host includes a correlation result transmission unit that receives and displays the correlation result transmitted through

**LEXIS-NEXIS**  
**Library: PATENT**  
**File: ALL**

unit that receives and displays the correlation result transmitted through  
transmission system from correlation result transmission circuit, associated  
message file storage unit and CB operation display unit.

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**Library: PATENT**  
**File: ALL**

6,198,402 OR 6198402

**LEXIS-NEXIS**

**Library: PATENT**

**File: CASES**

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What you enter will be Search Level 1.

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**Library: PATENT**  
**File: JNLS**

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File 345:Inpadoc/Fam.& Legal Stat 1968-2003/UD=200308  
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Set	Items	Description
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? s pn=us 6198402		
S1	1	PN=US 6198402
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1/39/1

DIALOG(R)File 345:Inpadoc/Fam.& Legal Stat  
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15495091

Basic Patent (No,Kind,Date): JP 11299074 A2 19991029 <No. of Patents: 006  
>

Patent Family:

Patent No	Kind	Date	Applic No	Kind	Date
CN 1271195	A	20001025	CN 99105145	A	19990419
EP 957555	A2	19991117	EP 99107665	A	19990416
EP 957555	A3	20000726	EP 99107665	A	19990416
JP 11299074	A2	19991029	JP 98108255	A	19980417 (BASIC)
JP 3207388	B2	20010910	JP 98108255	A	19980417
US 6198402	BA	20010306	US 292683	A	19990416

Priority Data (No,Kind,Date):

JP 98108255 A 19980417

PATENT FAMILY:

CHINA (CN)

Patent (No,Kind,Date): CN 1271195 A 20001025

PROTECTIVE CONTROLLER, MONITORING SYSTEM AND STORAGE MEDIUM OF STORAGE  
PROGRAM (English)

Patent Assignee: TOKYO SHIBAURA ELECTRIC CO (JP)

Author (Inventor): SHU HASEGAWA (JP); YOSHIHIRO SHIRATA (JP); YASUO  
KAINO (JP)

Priority (No,Kind,Date): JP 98108255 A 19980417

Applic (No,Kind,Date): CN 99105145 A 19990419

IPC: \* H02H-003/00; H02H-007/22; G05B-023/00

Derwent WPI Acc No: \* G 00-001189

Language of Document: Chinese

EUROPEAN PATENT OFFICE (EP)

Patent (No,Kind,Date): EP 957555 A2 19991117

ELECTRIC POWER SYSTEM PROTECTION AND CONTROL SYSTEM (English; French;  
German)

Patent Assignee: TOKYO SHIBAURA ELECTRIC CO (JP)

Author (Inventor): HASEGAWA OSAMU (JP); SIROTA YOSHIHIRO (JP); KAINO  
YASUO (JP)

Priority (No,Kind,Date): JP 98108255 A 19980417

Applic (No,Kind,Date): EP 99107665 A 19990416

Designated States: (National) CH; DE; FR; GB; LI; SE

IPC: \* H02H-003/00

Derwent WPI Acc No: \* G 00-001189; G 00-001189

Language of Document: English

Patent (No,Kind,Date): EP 957555 A3 20000726

ELECTRIC POWER SYSTEM PROTECTION AND CONTROL SYSTEM (English; French;  
German)

Patent Assignee: TOKYO SHIBAURA ELECTRIC CO (JP)

Author (Inventor): HASEGAWA OSAMU (JP); SIROTA YOSHIHIRO (JP); KAINO  
YASUO (JP)

Priority (No,Kind,Date): JP 98108255 A 19980417  
Applic (No,Kind,Date): EP 99107665 A 19990416  
Designated States: (National) AT; BE; CH; CY; DE; DK; ES; FI; FR; GB;  
GR; IE; IT; LI; LU; MC; NL; PT; SE  
IPC: \* H02H-003/00  
Derwent WPI Acc No: \* G 00-001189  
Language of Document: English

EUROPEAN PATENT OFFICE (EP)

Legal Status (No,Type,Date,Code,Text):

EP 957555	P	19980417	EP AA	PRIORITY (PATENT APPLICATION) (PRIORITAET (PATENTANMELDUNG))
EP 957555	P	19990416	EP AE	JP 98108255 A 19980417 EP-APPLICATION (EUROPAEISCHE ANMELDUNG)
EP 957555	P	19991117	EP AK	EP 99107665 A 19990416 DESIGNATED CONTRACTING STATES IN AN APPLICATION WITHOUT SEARCH REPORT: (IN EINER ANMELDUNG OHNE RECHERCHENBERICHT BENANNTE VERTRAGSSTAATEN)
EP 957555	P	19991117	EP AX	CH DE FR GB LI SE ERSTRECKUNG DES EUROPAEISCHEN PATENTS AUF (ZAHLUNG VON BENENNUNGSGEBUEHREN) AL;LT;LV;MK;RO;SI
EP 957555	P	19991117	EP A2	PUBLICATION OF APPLICATION WITHOUT SEARCH REPORT (VEROEFFENTLICHUNG DER ANMELDUNG OHNE RECHERCHENBERICHT)
EP 957555	P	19991117	EP 17P	REQUEST FOR EXAMINATION FILED (PRUEFUNGSANTRAG GESTELLT) 19990416
EP 957555	P	20000726	EP AK	DESIGNATED CONTRACTING STATES IN A SEARCH REPORT: (IN EINEM RECHERCHENBERICHT BENANNTE VERTRAGSSTAATEN)
EP 957555	P	20000726	EP AX	AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE ERSTRECKUNG DES EUROPAEISCHEN PATENTS AUF (ZAHLUNG VON BENENNUNGSGEBUEHREN) AL;LT;LV;MK;RO;SI
EP 957555	P	20000726	EP A3	SEPARATE PUBLICATION OF THE SEARCH REPORT (ART. 93) (GESONDERTE VEROEFFENTLICHUNG DES RECHERCHENBERICHTS (ART. 93))
EP 957555	P	20010404	EP AKX	PAYMENT OF DESIGNATION FEES (ZAHLUNG VON BENENNUNGSGEBUEHREN) CH DE FR GB LI SE
EP 957555	P	20010816	EP 17Q	FIRST EXAMINATION REPORT (ERSTER PRUEFUNGSBESCHIED) 20010629

JAPAN (JP)

Patent (No,Kind,Date): JP 11299074 A2 19991029  
POWER SYSTEM PROTECTING AND CONTROLLING DEVICE, POWER SYSTEM MONITORING AND CONTROLLING SYSTEM, AND STORAGE MEDIUM WITH PROGRAM RECORDED THEREIN (English)  
Patent Assignee: TOKYO SHIBAURA ELECTRIC CO  
Author (Inventor): HASEGAWA OSAMU; SHIRATA YOSHIHIRO; KAINO YASUO

Priority (No,Kind,Date): JP 98108255 A 19980417  
Applic (No,Kind,Date): JP 98108255 A 19980417  
IPC: \* H02H-003/00; H02H-007/26; H04L-012/40  
Derwent WPI Acc No: \* G 00-001189  
Language of Document: Japanese  
Patent (No,Kind,Date): JP 3207388 B2 20010910  
Priority (No,Kind,Date): JP 98108255 A 19980417  
Applic (No,Kind,Date): JP 98108255 A 19980417  
IPC: \* H02H-003/00; H02H-003/02; H02H-007/26; H02J-013/00  
Derwent WPI Acc No: \* G 00-001189  
Language of Document: Japanese

UNITED STATES OF AMERICA (US)

Patent (No,Kind,Date): US 6198402 BA 20010306  
ELECTRIC POWER SYSTEM PROTECTION AND CONTROL SYSTEM (English)  
Patent Assignee: TOKYO SHIBAURA ELECTRIC CO (US)  
Author (Inventor): HASEGAWA OSAMU (JP); SIROTA YOSIHIRO (JP); KAINO  
YASUO (JP)  
Priority (No,Kind,Date): JP 98108255 A 19980417  
Applic (No,Kind,Date): US 292683 A 19990416  
National Class: \* 340635000; 340286010; 340286020  
IPC: \* G08B-021/00  
Derwent WPI Acc No: \* G 00-001189  
Language of Document: English

UNITED STATES OF AMERICA (US)

Legal Status (No,Type,Date,Code,Text):  
US 6198402 P 19980417 US AA PRIORITY (PATENT)  
JP 98108255 A 19980417  
US 6198402 P 19990416 US AE APPLICATION DATA (PATENT)  
(APPL. DATA (PATENT))  
US 292683 A 19990416  
US 6198402 P 20010306 US BA PATENT (NO PREVIOUS  
PRE-GRANT PUBLICATION)

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